ABSTRACT OF THE DISCLOSURE

In a method and a device to localize regions in a biological tissue section, at least during the examination the tissue section exhibits one fluorescence property differing from the tissue section, due to which, given an exposure with light of a first wavelength, light of another wavelength is emitted.

A sequence of fluorescence-exciting light signals at different locations on the tissue-section is applied. Fluorescence light is measured at a number of measurement locations on a surface of the tissue section, which appears there due to the light signals. Frequency-independent signal portions in the response signals are determined and are further processed into input values of a localization step. The tissue section is modeled and a set of guide fields is determined. The guide fields are transformed that in a localization step the frequency-independent signal portions are compared with the transformed guide fields, and the location of the transformed guide fields that best reproduce the frequency-independent signal portions is output as the location of the region to be localized.

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